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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAN G. PRIEM

Appeal 2008-0486
Application 10/657,758
Technology Center 2800

Decided: June 12, 2008

Before ANITA PELLMAN GROSS, ROBERT E. NAPPI, and KEVIN F.
TURNER *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 6(b) of the final rejection of claims 1 through 35.

We affirm in part the Examiner's rejections of these claims.

INVENTION

The invention is directed to a system to inhibit automatic starting of an AC generator in a recreation vehicle. See pages 1 and 2 of Appellant's Specification. Claim 1 is representative of the invention and reproduced below:

1. A system comprising:

an actuator circuit, to automatically start a fuel-powered AC generator when a load circuit needs AC electrical power from the AC generator; a sensor circuit, to detect a fault condition indicative of a risk of an exhaust hazard; and a logic circuit, coupled to the sensor and actuator circuits, to disable the actuator circuit when the fault condition indicates that the risk of the exhaust hazard is present.

REFERENCES

Reuyl	US 4,182,960	Jan. 8, 1980
Kawaguchi	US 4,961,403	Oct. 9, 1990
Ito	US 5,276,624	Jan. 4, 1994
James	US 5,333,703	Aug. 2, 1994
Duke	US 5,432,413	Jul. 11, 1995
Riedel	US 5,954,040	Sep. 21, 1999
Graber	US 6,534,958 B1	Mar. 18, 2003
Ulinski	US 6,700,214 B2	Mar. 2, 2004
		(filed Aug. 24, 2001)

REJECTIONS AT ISSUE

Claims 1, 5, 7, 20, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James. The Examiner's rejection is on pages 4 and 5 of the Answer.

Claims 2 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James in view Ulinski. The Examiner's rejection is on pages 5 and 6 of the Answer.

Claims 9, 13, 23, 26, 28, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James and Ito. The Examiner's rejection is on pages 6 of the Answer.

Claims 8, 11, 12, 14, 15, 22, 25, 27, 30, 31, 32, 33, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James, Ito, and Riedel. The Examiner's rejection is on pages 6 and 7 of the Answer.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James and Graber. The Examiner's rejection is on pages 7 and 8 of the Answer.

Claims 10 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James, Ito, and Duke. The Examiner's rejection is on page 8 of the Answer.

Claims 6, 16, 17, 18, 19, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reuyl in view of James and Kawaguchi. The Examiner's rejection is on pages 9 of the Answer.

Throughout the opinion, we make reference to the Brief (received September 14, 2007) and the Answer (mailed May 17, 2006) for the respective details thereof.

ISSUES

Rejection of claims 1, 5, 7, 20, and 21.

Appellant argues on pages 17 through 19 of the Brief that the Examiner's rejection of claims 1, 5, 7, 20, and 21 is in error. Appellant asserts that "Reuyl and James do not include any disclosure, teaching, or suggestion of being combined in the manner used by the Office Action." Br.

18. Appellant reasons that James recognizes the hazard of CO from an already running engine but does not recognize the potential hazard in an engine that is not yet running. Br. 17. Further, Appellant reasons that since Reuyl teaches venting exhaust gasses away, Reuyl fails to provide a reason to use a system such as taught by James. Br. 17.

With respect to claim 5, Appellant further argues that the combination of the references does not teach starting a fuel powered generator when a load circuit, that includes a partially AC powered electrical appliance of a vehicle, needs power.

With respect to claims 7 and 21, Appellant further argues that the combination of the references does not teach a vehicle transmission position detector as claimed.

Thus, Appellant's contentions with respect to the rejection of claims 1, 5, 7, 20, and 21 present us with the issue of whether the Examiner erred in combining the CO monitoring system of James with Reuyl's system. Appellant's contentions with respect to claim 5 additionally present the issue of whether the Examiner erred in finding that the combination of the references teaches starting a fuel powered generator when a load circuit, that includes a partially AC powered electrical appliance of a vehicle, needs power. Appellant's contentions with respect to claims 7 and 21 additionally present the issue of whether the Examiner erred in finding that the combination of the references teaches a vehicle transmission position detector as claimed.

Rejection of claims 2 and 4.

Appellant argues on pages 19 and 20 of the Brief that the Examiner's rejection of claims 2 and 4 is in error. Appellant argues that the rejection is in error for the reasons discussed with respect to independent claim 1. Further, with respect to claim 4, Appellant argues that neither Reuyl, James, nor Ulinski teaches or suggests inhibiting automatic starting of a diesel engine.

Thus, Appellant's contentions with respect to the rejection of claims 2 and 4 present us with the same issue as discussed with respect to claim 1. Further, with respect to claim 4, Appellant's contention presents us with the issue of whether the Examiner erred in determining that the combination of Reuyl, James, or Ulinski teaches or suggests inhibiting automatic starting of a diesel engine.

Rejection of claims 9, 13, 23, 26, 28, and 29.

Appellant argues on page 20 of the Brief that the Examiner's rejection of claims 9, 13, 23, 26, 28, and 29 is in error. Appellant argues that the rejection is in error for the reasons discussed with respect to independent claim 1. Further, with respect to claims 9, 23, and 26 Appellant argues that neither Reuyl, James, nor Ito discloses a wheel rotation sensor or other technique to determine if the vehicle is stopped. With respect to claims 13, 28 and 29, Appellant argues that neither Reuyl, James, nor Ito discloses using an ignition key position sensor or detecting the change in a vehicular ignition state.

Thus, Appellant's contentions with respect to the rejection of claims 9, 13, 23, 26, 28, and 29 present us with the same issue as discussed with

respect to claim 1. Further, Appellant's contentions present us with the issue of whether the Examiner erred in determining that the combination of Reuyl, James, and Ito teaches or suggests: a) a wheel rotation sensor or other technique to determine if the vehicle is stopped as claimed (with respect to claims 9, 23, and 26) and b) an ignition key position sensor or detecting the change in the vehicular ignition state (with respect to claims 13, 28, and 29).

Rejection of claims 8, 11, 12, 14, 15, 22, 25, 27, 30, 31, 32, 33 and 34.

Appellant argues on page 20 that the Examiner's rejection of claims 8, 11, 12, 14, 15, 22, 25, 27, 30, 31, 32, 33 and 34 is in error. Appellant argues that the rejection is in error for the reasons discussed with respect to independent claim 1. Further, Appellant specifically addresses limitations of claims 8, 11, 12, 22, 25 27 and 30 and alleges that they are not disclosed, taught, or suggested by Reuyl, James, Ito, or Riedel.

Thus, Appellant's contentions with respect to the rejection of claims 8, 11, 12, 14, 15, 22, 25, 27, 30, 31, 32, 33 and 34 present us with the same issue as discussed with respect to claim 1. Further, Appellant's contentions present us with the issue of whether the Examiner erred in determining that the combination of Reuyl, James, Ito, and Riedel teaches the limitations addressed in Appellant's arguments.

Rejection of claim 3

Appellant argues on page 22 that the Examiner's rejection of claim 3 over Reuyl, James, and Garber is in error. Appellant argues that the rejection is in error for the reasons discussed with respect to independent

claim 1. Thus, Appellant's contentions present the same issue as presented with claim 1.

Rejection of claims 10 and 24.

Appellant argues on page 23 of the Brief that the Examiner's rejection of claims 10 and 24 is in error. Appellant argues that the rejection is in error for the reasons discussed with respect to independent claim 1. Further, Appellant argues that the claims recite using a reluctance sensor which is not disclosed, taught, or suggested by Reuyl, James, Ito, or Duke.

Thus, Appellant's contentions with respect to the rejection of claims 10 and 24 present us with the same issue as discussed with respect to claim 1. Further, Appellant's contentions present us with the issue of whether the Examiner erred in determining that the combination of Reuyl, James, Ito, and Duke teaches using a reluctance sensor as claimed.

Rejection of claims 6, 16, 17, 18, 19, and 35

Appellant argues on page 23 that the Examiner's rejection of claims 6, 16, 17, 18, 19, and 35 over Reuyl, James, and Kawaguchi is in error. Appellant argues that the rejection is in error for the reasons discussed with respect to independent claim 1. Thus, Appellant's contentions present the same issue as presented with claim 1.

PRINCIPLES OF LAW

On the issue of obviousness, the Supreme Court has recently stated that "[t]he combination of familiar elements according to known methods is

likely to be obvious when it does no more than yield predictable results.”

KSR Int’l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739 (2007).

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id. at 1740. “One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *Id.* at 1742.

37 C.F.R. § 41.37 (c)(1)(vii) states:

For each ground of rejection applying to two or more claims, the claims may be argued separately or as a group. When multiple claims subject to the same ground of rejection are argued as a group by appellant, the Board may select a single claim from the group of claims that are argued together to decide the appeal with respect to the group of claims as to the ground of rejection on the basis of the selected claim alone. Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately.... A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.

FINDINGS OF FACT

1. Reuyl teaches an energy system for a residence which manages both heating and electrical energy. The system integrates an automobile, such as a hybrid electric vehicle, with the residence such that the vehicle's fuel driven engine can be used as a supplementary source of energy. Abstract.
2. Reuyl teaches that if the storage level of the batteries in the house go below a certain level, the generator of the automobile is started and used to supply energy to the residence. Col. 4, l. 67 – col. 5, l. 5.
3. The heat generated by the automobile engine is also captured and stored for use in the residence. This heat is captured through heat exchangers with the vehicle's exhaust and engine cooling systems. Reuyl col. 5, ll. 18-21, col. 7, ll. 45-48.
4. The exhaust gasses are vented to the open air. Reuyl, col. 7, ll. 48-50.
5. Reuyl teaches that the vehicle is a hybrid electric vehicle and identifies several vehicles, but does not describe the specific details of the vehicle control systems.
6. James teaches a system for monitoring the carbon monoxide (CO) levels both inside and outside the vehicle. Based upon these detected CO levels the system may disable the vehicle's engine. Abstract, col. 6, ll. 41-45.

7. James' system monitors other parameters of the vehicle such as motion of the vehicle, ignition switch position, transmission gear position, and clutch position. A speedometer or tachometer can be used to determine vehicle motion. See, figure 1, col. 5, ll. 37-65.
8. These sensors are used so that the vehicle's engine is not disabled when the vehicle is in motion and so that the vehicle can be moved from a location of high CO concentration. James, col. 5, ll. 18-31.
9. James teaches that the system can be a stand alone system or integrated into other systems. Col. 11, ll. 37-40.
10. James' system disables the engine by either disabling the ignition system or by disabling the vehicle's electric fuel pump. Col. 6, ll. 42-50.
11. Once disabled the system continuously disables the engine until the ignition switch or the reset switch are operated. Thus, once CO is detected, the operation of the vehicle's engine is inhibited until the system is reset. James col. 6, ll. 50-53.
12. Ulinski teaches a system to supply electrical power to a load using a vehicles' engine to drive the generator. Abstract, Col. 3, ll. 52-55.
13. Ulinski teaches that the vehicle's engine may be a diesel engine. Col. 11, ll. 34-47.

ANALYSIS

Rejection of claims 1, 5, 7, 20, and 21.

Claims 1 and 20.

Appellant's arguments have not persuaded us that the Examiner erred in combining the CO monitoring system of James with Reuyl's system.

Claim 1 recites three circuits, an actuator circuit to start a fuel powered generator, a sensor circuit to sense a fault condition indicative of an exhaust hazard, and a logic circuit coupled to the sensor and actuator circuits.

The Examiner finds on page 10 of the Answer that Reuyl discloses an automatic starter for a generator, and that James teaches that it is common to disable the circuit to operate a machine if there is a risk of exhaust hazard. Further, on page 11 of the Answer, the Examiner finds that both references teach operation of vehicle combustion engines, and both systems make use of sensors and circuits to control the operation of the engine. Based upon these findings, the Examiner reasons that one would combine the references to monitor and obtain the efficiency as taught by Reuyl and to monitor carbon monoxide to disable the engine if there is a risk of exhaust hazard.

Ans. 5.

We concur with the Examiner's findings and the reasoning to combine the references. Reuyl's system is concerned with managing energy in a home and makes use of the generator in a hybrid vehicle to supplement the energy in the home. Fact 1. Reuyl captures both electricity and heat, from the exhaust of a vehicle, for use in the home. Fact 3. Reuyl's system starts the vehicle generator when electricity is needed. Fact 2. Thus, Reuyl teaches the claimed actuator circuit. Reuyl discusses the general parameters of the hybrid vehicle to be used in the system but is silent as to the control of the generator in the vehicle. Fact 5. James teaches a vehicle control system, which monitors CO concentrations among other parameters of the vehicle. Facts 6 and 7. Thus, James teaches the claimed sensor circuit. Based upon the signal from these circuits, James disables operation of the vehicle engine. Facts 6 and 8. The system is such that if the vehicle is moving, the engine

will not be disabled, but if the vehicle is stationary and the CO concentrations are high the engine will be disabled. Fact 8. Thus, James also teaches the claimed logic circuit.

Based upon these teachings of James we conclude that it is well known to have a system to disable the operation of a stationary vehicle's engine when the CO concentration is high. It is readily apparent that in Reuyl the hybrid vehicle's generator is being used when the vehicle is not in motion, i.e. when parked and connected to the house. Thus, we consider using a vehicle with the CO monitoring as taught by James in the energy management system of Reuyl to be nothing more than the combination of familiar elements according to known methods, which will perform their intended purpose to produce predictable results, in this case disable the engine if the CO concentrations are high. Further, Reuyl's discussion of the vehicle being located in a ventilated area does not detract from the use of the CO system as James' system provides a safety system should the ventilation become inadequate such as operation of the car in a closed area caused by a snow drift or closed garage (see e.g. col. 1, 11. 33-50). Additionally, while James is concerned with disabling a running engine, James teaches that the engine is continuously disabled unless reset, thus the actuator circuit's ability to start the engine is disabled. Fact 11. As such, in combination, James' system will prevent starting of the vehicle engine, if the CO level is high.

For the aforementioned reasons, Appellant's arguments have not persuaded us that the Examiner erred in combining the CO monitoring system of James with Reuyl's system, and we sustain the Examiner's rejection of claim 1. Appellant's arguments do not separately address claim

20, thus in accordance with 37 C.F.R. § 41.37 (c)(1)(vii), claim 20 is grouped with claim 1, and we similarly sustain the Examiner's rejection of claim 20.

Claim 5

Appellant's arguments directed to claim 5 have persuaded us of error in the Examiner's rejection. Claim 5 recites that the load circuit includes at least partially AC powered electrical appliance of a vehicle. On page 13 of the Answer, the Examiner refers to Reuyl for teaching this limitation. We disagree with the Examiner's finding. While Reuyl teaches that the vehicle generator is used to provide power to the home, which assumedly includes AC powered electrical appliances, we do not find that Reuyl teaches that the generator is started to provide power to an AC powered electrical appliance of a vehicle.¹ Accordingly, we do not find that the Examiner has shown that all of the limitations of dependent claim 5 have been taught by the combination of the references. Thus, we will not sustain the Examiner's rejection of claim 5.

Claims 7 and 21

Appellant's arguments directed to claims 7 and 21 have not persuaded us that the Examiner erred in finding that the combination of the references teaches vehicle transmission position detector as claimed. Claim 7 recites that "the sensor circuit includes a vehicle transmission position sensor." We find that James teaches that the status sensor (item, 127 in figure 1) includes

¹ We note that the Reuyl discusses the vehicle's generator powering the vehicle's primary electric drive motor (col. 8, ll. 4-18), however Reuyl

indicators of the transmission being in park, neutral, and the position of the clutch. All of these are sensor signals which indicate position of elements of the transmission. That these sensors are used in conjunction with a determination of whether the vehicle is moving is of no consequence. Claim 7 does not recite a limitation which limits how the sensors are used in the system. Accordingly, Appellant's arguments have not persuaded us of error in the Examiner's rejection of claim 7 or claim 21 (which is grouped with claim 7), and we sustain the Examiner's rejection of claims 7 and 21.

Rejection of claims 2 and 4.

Claim 2

Appellant's arguments have not persuaded us of error in the Examiner's rejection of claim 2. Appellant's arguments assert that claim 2 is allowable for the reasons discussed with respect to claim 1. As discussed *supra*, we are not persuaded of error in the rejection of claim 1. Accordingly we sustain the Examiner's rejection of claim 2.

Claim 4

Appellant's arguments have not persuaded us that the Examiner erred in determining that the combination of Reuyl, James, and Ulinski teaches or suggests inhibiting automatic starting of a diesel engine. Claim 4 recites that the AC generator includes a diesel generator.

The Examiner finds that Ulinski teaches using a diesel engine for an AC generator. Ans. 5, 13. We concur with the Examiner's findings. We find that Ulinski teaches that a vehicle engine may be used as a generator

presents no evidence that the vehicle's electric motor operates on AC or that the fuel powered generator is started in response to the motor's power needs.

and that the engine may be diesel. Facts 12 and 13. Thus, Ulinski teaches that it is known to use diesel engines to power AC generators.

As discussed above with respect to claim 1, we find that the combination of Reuyl and James teaches all of the limitations of independent claim 1. We note that neither Reuyl nor James identifies the type of fuel that the engine of the vehicle burns. However, we note that as diesel engines are internal combustion engines, they also produce CO and as such the skilled artisan would recognize that high CO concentrations from the engine are a hazard. Further, we note that while James discusses disabling the ignition system (which is not present on a diesel engine, and as such would be inapplicable to a diesel engine), James also discusses disabling the fuel system (the typical method of disabling a diesel engine). Fact 10. Thus, we consider James to be equally applicable to spark ignition and diesel engines. As such, we consider using Reuyl and James' system to disable the operation of a vehicle's diesel powered AC generator, such as taught by Ulinski, is nothing more than using existing elements for their established functions. Accordingly, we sustain the Examiner's rejection of claim 4.

Rejection of claims 9, 13, 23, 26, 28, and 29.

Claims 9, 23 and 26

Appellant's arguments have not persuaded us that the Examiner erred in determining that the combination of Reuyl, James, and Ito teaches or suggests a wheel rotation sensor or other techniques to determine if the vehicle is stopped. Claim 9 recites that the sensor circuit includes a wheel rotation sensor. James teaches that the engine is not disabled if the vehicle is in motion. Fact 8. One of the sensors to determine if the vehicle is in

motion is a speedometer. Fact 7. One skilled in the art would recognize that a speedometer provides an indication based upon a sensed wheel rotation. Thus, we do not find that the Examiner erred in rejecting claims 9, 23, and 26 (Appellant's arguments group claims 9, 23, and 26 together) and we sustain the Examiner's rejection.

Claims 13, 28, and 29

Appellant's arguments have not persuaded us that the Examiner erred in determining that the combination of Reuyl, James, or Ito teaches or suggests an ignition key position sensor or detecting the change in the vehicular ignition state. Claim 13 recites that the sensor circuit includes a vehicle engine ignition key position sensor. James teaches that one of the sensors monitors the ignition key position. Fact 7. This sensor is used to determine if the system should be reset. Fact 11. Thus we do not find that the Examiner erred in rejecting claims 13, 28, and 29 (Appellant's arguments grouped claims 13, 28, and 29 together) and sustain the Examiner's rejection.

Rejection of claims 8, 11, 12, 14, 15, 22, 25, 27, 30, 31, 32, 33, and 34.

Claims 14, 15, 32, 33, and 34

We note that Appellant's arguments do not directly address claims 14, 15, 32, 33, and 34. The only argument with respect to the rejection of these claims relates to the rejection being in error for the reasons discussed with respect to claim 1. Claims 14, 15, 32, 33, and 34 are directed to the sensor circuit containing exhaust gas sensors. As discussed above we sustain the

Examiner's rejection and find that James teaches monitoring CO concentrations (which come from exhaust gas). Thus, we sustain the Examiner's rejection of claims 14, 15, 32, 33, and 34 for the reasons discussed with respect to claim 1.

Claim 8

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 8. Appellant argues, on page 21 of the Brief, that Reuyl, James, Ito, and Riedel do not disclose, teach, or suggest a data link as claimed.

Claim 8 recites wherein the sensor circuit includes a data link. Appellant's Specification, on page 5, identifies the data link as providing data from a sensor on a component of the car (e.g. transmission) to the fault control logic. The Examiner finds that Riedel teaches a data link in figure 1. We concur with the Examiner's findings. Riedel teaches an engine control system where there are various sensors (depicted on the left side of figure 1) which provide input to the control unit. Riedel col. 3, ll. 18-50. This is a similar arrangement to that shown in figure 1 of James, where the sensor provides input to a digital signal conditioner. One skilled in the art would recognize that many of the sensors are remote from the control unit, e.g. the transmission gear selection lever position is mounted with the gear shifter lever or the transmission, and the ignition key position sensor is mounted with the key switch. As such, the lines in figure 1 of Riedel from the sensors to the control unit (and in figure 1 of James from the sensors to the digital or analog input signal conditioner) are a data link in that they provide data from a sensor on a component of the car to the control unit. Thus, Appellant's arguments have not persuaded us of error in the Examiner's rejection of

claim 8, as we find ample evidence that the combination of the references teaches a data link as claimed. Accordingly, we sustain the Examiner's rejection of claim 8.

Claim 11

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 11. Appellant argues, on page 21 of the Brief, that Reuyl, James, Ito, and Riedel do not disclose, teach, or suggest an engine operation sensor as claimed.

Claim 11 recites the sensor circuit includes a vehicle engine operation sensor. Appellant's Specification identifies that one type vehicle engine operation sensor monitors the engine's rotation per minute (rpm). Spec. 5, ll. 19-22. As discussed above, James teaches that many sensors of the vehicle are monitored, one of which is a tachometer. Fact 7. One skilled in the art would recognize that a tachometer provides an indication of engine rpm. Thus, we find that James discloses a vehicle engine operation sensor as claimed. Accordingly, Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 11, and we sustain the Examiner's rejection.

Claim 12

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 12. Appellant argues, on page 21 of the Brief, that Reuyl, James, Ito, and Riedel do not disclose, teach, or suggest an engine rpm sensor as claimed.

Claim 12, recites the sensor circuit includes a vehicle engine rpm sensor. As discussed above with respect to claim 11, we find that James

teaches this limitation. Accordingly, we sustain the Examiner's rejection of claim 12.

Claim 22

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 22. Appellant argues, on page 21 of the Brief, that Reuyl, James, Ito, and Riedel do not disclose, teach, or suggest using a data link to detect vehicle transmission position and inhibit the automatic starting of the fuel powered engine. As discussed above with respect to claim 8 we find that the combination of the references teaches the claimed data link. Further, with respect to inhibiting automatic starting of the engine, as discussed above with respect to claim 1, James' system teaches that the operation of the engine is inhibited until the system is reset, and, thus, James teaches inhibiting starting of the engine. Accordingly, Appellant's arguments have not persuaded us of error in the Examiner's rejection of claim 22, and we sustain the rejection.

Claim 25

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 25. Appellant argues, on pages 21 and 22 of the Brief, that Reuyl, James, Ito, and Riedel do not disclose, teach, or suggest using a data link to detect wheel rotation and inhibit the automatic starting of the fuel powered engine. As discussed above with respect to claims 8 and 9 we find that the combination of the references teaches the claimed data link, and sensing wheel rotation. Further, with respect to inhibiting automatic starting of the engine, as discussed above with respect to claim 1, James' system teaches that the operation of the engine is inhibited until the system is reset, and, thus, James teaches inhibiting starting of the engine. Accordingly,

Appellant's arguments have not persuaded us of error in the Examiner's rejection of claim 23, and we sustain the rejection.

Claim 27

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 27. Appellant argues, on page 22 of the Brief, that Reuyl, James, Ito, and Riedel do not disclose, detecting a change in operation from engine running to engine off. Claim 27 recites detecting a change in vehicular engine operation from engine running to engine off. Appellant's Specification identifies that this is sensing that the ignition is turned from on to off. Spec.5: 25-27. Thus, the scope of this limitation includes monitoring the position of the ignition switch. As discussed with respect to claim 9, James teaches sensing the ignition switch position. Thus, we find that James teaches detecting a change in operation from engine running to engine off as claimed. Accordingly, Appellant's arguments have not persuaded us of error in the Examiner's rejection of claim 27, and we sustain the rejection.

Claims 30 and 31

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 30 and 31. Appellant argues, on page 22 of the Brief that Reuyl, James, Ito, and Riedel do not disclose detecting a change in vehicular ignition state as recited in these claims by their dependence on claim 28. As discussed *supra* we are not persuaded of error in the Examiner's rejection of claim 28. Accordingly, Appellant's arguments have not persuaded us of error in the Examiner's rejection of claims 30 and 31, and we sustain the rejection.

Rejection of claim 3

Appellant's argument that the rejection of claim 3 is in error for the reasons discussed with respect to claim 1 have not persuaded us of such error. For the reasons discussed *supra* with respect to claim 1 we sustain the Examiner's rejection of claim 3.

Rejection of claims 10 and 24.

Appellant's arguments have not persuaded us that the Examiner erred in rejecting claim 10 and 24. Claim 10 recites that the sensor circuit includes a reluctance sensor. Appellant's Specification identifies that this sensor is used to monitor wheel speed. Spec. 5:11-13. As discussed above with respect to claim 9, James discusses monitoring wheel speed. James does not identify the type of sensor used to monitor the rotational speed of the wheel. The Examiner finds that Duke teaches using reluctance sensors to monitor speed. Ans. 8. We concur with the Examiner and find that Duke teaches a reluctance sensor to measure rotational speed. Col. 7, ll. 45-47. Thus, we consider using a the reluctance sensor as taught by Duke as the motion sensor for the speedometer in James to be nothing more than the combination of familiar elements according to known methods which will perform their intended purpose to produce a signal indication of speed. Accordingly, Appellant's arguments have not persuaded us of error in the Examiner's rejection of claims 10 and 24, and we sustain the rejection.

CONCLUSION

For the foregoing reasons, we sustain the Examiner's rejections of claims 1 through 4 and 6 through 35 under 35 U.S.C. § 103(a) and we reverse the Examiner's rejection of claim 5 under 35 U.S.C. § 103(a).

ORDER

The decision of the Examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

Appeal 2008-0486
Application 10/657,758

AFFIRMED

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